

**UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS**

SCANSOFT, INC.,

Plaintiff,

V.

VOICE SIGNAL TECHNOLOGIES, INC.,
LAURENCE S. GILLICK, ROBERT S.
ROTH, JONATHAN P. YAMRON, and
MANFRED G. GRABHERR,

Defendants.

C.A. No. 04-10353-PBS

DECLARATION OF WENDY S. PLOTKIN

Wendy S. Plotkin deposes and states as follows:

1. I am an attorney in the law firm of Choate, Hall & Stewart, and a member of the bar of the Supreme Judicial Court of the Commonwealth of Massachusetts and the United States District Court for the District of Massachusetts. I am counsel to the above-named defendants and make this declaration in support of Voice Signal Technologies' Sur-Reply in Support of its Claim Construction Memorandum for U.S. Patent 6,501,966.

2. Attached hereto as Ex. 1 is a true and correct copy of a portion of the deposition transcript of Thomas Schalk.

* * *

Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct to the best of my knowledge and belief.

/s/ Wendy S. Plotkin

Dated: June 16, 2005

Exhibit 1

UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS

)	
SCANSOFT, INC.,)	
)	
Plaintiff,)	
)	
v.)	C.A. No. 04-10353-PBS
)	
VOICE SIGNAL)	
TECHNOLOGIES, INC.,)	
LAURENCE S. GILICK,)	
ROBERT S. ROTH,)	
JONATHAN P. YAMRON,)	
and MANFRED G. GRABHERR,)	
)	
Defendants.)	

DEPOSITION OF THOMAS B. SCHALK, a witness
called by and on behalf of the Defendants, taken
pursuant to the applicable provisions of the Federal
Rules of Civil Procedure, before Dana Ulrich Welch,
CSR, Registered Professional Reporter, and Notary
Public, in and for the Commonwealth of Massachusetts,
at the offices of Choate, Hall & Stewart, 53 State
Street, Boston, Massachusetts, on January 28, 2005,
commencing at 9:18 a.m.

Job No.: 2197

ORIGINAL

1 APPEARANCES:

2 For the Defendants:

3 CHOATE, HALL & STEWART, P.C.

Exchange Place

4 53 State Street

Boston, Massachusetts 02109

5 (617) 248-5000

By: Robert S. Frank Jr., Esq.

6

7 For the Plaintiff:

8 BROMBERG & SUNSTEIN, LLP

125 Summer Street, 11th Floor

9 Boston, Massachusetts 02110-1618

(617) 443-9292

10 And: Jack C. Schecter, Esq.

11

Also Present: Daniel Roth

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I N D E X

WITNESS: THOMAS B. SCHALK PAGE NO.

By Mr. Frank 4

Certificate of the Reporter 245

E X H I B I T S

NO.	DESCRIPTION	PAGE NO.
1 -	ComTel '85 Documents	25
2 -	Schalk Article	30
3 -	SpeechTech '86 Article	54
4 -	Uniden Voice Dial Operating Guide	91
5A-	License Agreement	133
5B-	Amendment to License Agreement	133
6 -	U.S. Patent 6,501,966 B1	141

1 P R O C E E D I N G S

2 (The Texas driver's license number as
3 identification of the deponent was noted
4 for the record.)

5 WHEREUPON,

6 THOMAS B. SCHALK,
7 having duly sworn or affirmed that his
8 testimony would be the truth, the whole truth,
9 and nothing but the truth, testified as
10 follows:

11 MR. FRANK: I'm not quite sure what the
12 previous arrangement has been, but we're
13 prepared to stipulate that, although Mr.
14 Schalk should read and sign the deposition,
15 that it need not be -- his signature need
16 not be notarized.

17 And the only other agreement that I'd
18 ask is if there are no corrections after
19 30 days, that the deposition be deemed to
20 have been signed in its then current form.
21 Is that acceptable?

22 MR. SCHECTER: That's acceptable.

23 DIRECT EXAMINATION

24 BY MR. FRANK:

1 Q. Good morning, sir. Tell us your name,
2 please.

3 A. Thomas Barton Schalk.

4 Q. Where do you live, Mr. Schalk?

5 A. In Plano, Texas.

6 Q. May I have the street address, please?

7 A. 6637 Muirfield Circle.

8 Q. Are you presently employed?

9 A. Yes.

10 Q. By whom are you presently employed?

11 A. ATX Technologies.

12 Q. What is your position at ATX
13 Technologies?

14 A. I'm vice-president of voice technology.

15 Q. And as vice-president of voice
16 technology, what are your duties, just in
17 general?

18 A. I lead the voice automation team.

19 Q. Would you describe your educational
20 background beginning with college?

21 A. I attended George Washington University
22 and graduated in 1973 with an EE in -- or a BS
23 in electrical engineering.

24 And then I went to graduate school at

1 you to train it, you would instead attempt to
2 dial or play back the phone number pending.

3 Q. So if you said a key word like "home"
4 or "office," it would determine whether there
5 was a previously stored telephone number
6 associated with that word. And if it
7 determined that there was such a phone number,
8 it would then pass that phone number off --

9 A. It would attempt to dial whatever was
10 programed in association with the target
11 designations like "home," "office" and so
12 forth.

13 Q. And is it correct that the Uniden
14 system included or employed a speech
15 recognition method?

16 MR. SCHECTER: Objection.

17 THE DEPONENT: A speech recognition. A
18 speech recognizer was used in the Uniden
19 phone that's described in the operating
20 guide.

21 BY MR. FRANK:

22 Q. Okay. Is it correct that the Uniden
23 phone utilized, and to be fair, I should point
24 out to you I'm following the words of the

1 claim, is it correct that the Uniden phone
2 utilized a speech recognition method for a
3 mobile telecommunications system?

4 MR. SCHECTER: Objection.

5 THE DEPONENT: Can you repeat that?

6 I'm trying to get the question.

7 BY MR. FRANK:

8 Q. Sure. Is it correct that the method
9 incorporated in the Uniden system was a speech
10 recognition method for a mobile
11 telecommunications system?

12 MR. SCHECTER: Objection.

13 THE DEPONENT: Not a mobile
14 communications system. It was an interface
15 to the phone, to the dialing process of the
16 phone.

17 BY MR. FRANK:

18 Q. What's the distinction that you're
19 making?

20 A. Well, the phone, and like a destination
21 that you're calling, I mean, that's all part of
22 the telecommunications system. But this is an
23 interface to the dialer, in the case of the
24 Uniden phone.

1 Q. Okay. Was the product that you called
2 an off-board product, a speech recognition
3 method for a mobile telecommunications system?

4 MR. SCHECTER: Objection.

5 THE DEPONENT: A speech recognition
6 method for a mobile telecommunications
7 system? In the context that the recognizer
8 was designed to work or to work on speech,
9 perform it's algorithm processing on speech
10 generated over a mobile telecommunications
11 network.

12 BY MR. FRANK:

13 Q. Okay. You distinguished before between
14 what you called an on-board product and an
15 off-board product.

16 A. Correct.

17 Q. Is it your testimony that the -- a
18 speech recognition method for a mobile
19 telecommunications system --

20 A. Let me just say, you're using verbiage
21 from the patent claims which are not -- I'm not
22 a patent expert. And you're using terms that
23 are making it difficult for me to interpret.

24 Q. Yes. Except I'm trying to get your

1 best understanding; that's all I can ask for.

2 A. But if you use different ways of
3 wording things, I can answer the questions
4 better.

5 Q. Unfortunately, I'm constrained by some
6 legal requirements to ask you some of these
7 questions this way.

8 A. And I'm not someone who is in a
9 position from a legal standpoint to interpret
10 some of the language.

11 Q. I'm asking from your perspective, both
12 as the inventor of this patent and as somebody
13 who's in the business. And I'm simply asking
14 for your understanding.

15 A. Okay. And I'm going to have to answer
16 the questions using terms I am comfortable with
17 and hoping that they match what you're
18 thinking.

19 Q. Okay. So let me ask whether a method
20 employed in the Uniden product, as described in
21 Schalk Exhibit 4, was a speech recognition
22 method for a mobile communications system?

23 A. The method employed in the Uniden
24 phone? Method, I'm not sure if you're talking

1 about the method of speech recognition, the
2 method associated with the logic of the call
3 flows.

4 Q. The method of speech recognition.

5 A. The method of speech recognition is
6 different in the Uniden phone than in a system
7 -- it's not necessarily the same.

8 Q. And is it correct that the method, the
9 speech recognition method used in the Uniden
10 phone is, in your opinion, not a speech
11 recognition method for a mobile
12 telecommunications system?

13 MR. SCHECTER: Objection.

14 THE DEPONENT: In a general sense -- it
15 depends on how you define it. The speech
16 recognizer in the Uniden phone is designed
17 to recognize speech going through the
18 handset, the audio as its received.

19 You may have situations where you're
20 speaking into a handset where the audio is
21 transmitted to an off-board recognizer, the
22 recognition would be different, details of
23 the algorithm and such.

24 BY MR. FRANK:

1 Q. In your understanding is the speech
2 recognition method used in the Uniden product
3 described in Exhibit 4, a speech recognition
4 method for a mobile telecommunications system?

5 MR. SCHECTER: Objection.

6 THE DEPONENT: System? It doesn't make
7 a lot of sense to describe it that way.
8 The Uniden phone is an embedded speech
9 recognizer that has direct input from a
10 microphone and serves as an interface to a
11 phone that is then part of a system.

12 BY MR. FRANK:

13 Q. When you say then part of the system,
14 you're referring to --

15 A. A mobile -- when I think of mobile
16 telecommunications system, I think of, you
17 know, communications media, a way you can
18 communicate from one phone to another phone.
19 This is an interface to the dialing piece of
20 the phone.

21 Q. Let me ask a question that may help
22 clarify. You've described a system that Voice
23 Control Systems developed for Brite Voice,
24 McCaw --

1 A. An application, yes.

2 Q. An application?

3 A. Yes.

4 Q. Was that a speech recognition method
5 for a mobile telecommunications system?

6 A. Speech recognition method is not a term
7 that I'm comfortable with.

8 There's speech recognition algorithm,
9 the details of how you process the speech. But
10 when you talk about a speech recognition
11 method, I'm not sure. I need another way for
12 you to describe that; that's really as simple
13 as that.

14 Q. Was it a speech recognition system for
15 a mobile telecommunications system, meaning
16 hardware and software together, that is, the
17 McCaw/MetroCell/Brite Voice product?

18 A. You could call it that. I'm just
19 making the point that when the term speech
20 recognition method, that doesn't -- that's not
21 consistent with how I would describe a speech
22 recognition algorithm or even a speech
23 recognition unit in a system.

24 Q. Okay. Now, let me ask you -- withdraw.

1 Q. Yes.

2 A. Yeah. The MIN is the cellular
3 telephone number. So you've got voice going
4 back and forth and data going back and forth
5 when you're using a cellular phone. So the
6 system knows your phone number as a way for,
7 you know, part of your billing, you know, the
8 phone number associated with your phone and
9 then there's a serial number as part of the
10 phone itself.

11 Q. Yes.

12 A. So the recognizer is not recognizing
13 the phone number associated with your phone.

14 Q. Does the speech recognition system --

15 A. The application does. The speech
16 recognizer, itself, doesn't. You may be
17 meaning the application when you say speech
18 recognition system. System is a broad term to
19 me, for clarification purposes.

20 Q. Was the decision to move or to have a
21 product where the voice recognition apparatus
22 was located at or as part of the central
23 switch, did that make it feasible to have a
24 combined speaker-dependent and

1 speaker-independent voice recognition system?

2 MR. SCHECTER: Objection.

3 THE DEPONENT: Actually, in my opinion
4 the algorithms that came about, that were
5 developed, could also be used on a system
6 that was not an off-board application. The
7 memory requirements turned out to be very,
8 very small.

9 BY MR. FRANK:

10 Q. So it's your opinion that it was the
11 algorithms developed by your group that made it
12 feasible to have the combined system?

13 MR. SCHECTER: Objection.

14 Mischaracterizes.

15 BY MR. FRANK:

16 Q. I'm not trying to mischaracterize.
17 Correct me if I'm wrong.

18 A. We developed a way to extend our
19 speaker-independent algorithm to operate in a
20 speaker-dependent mode. The memory
21 requirements to represent what we refer to as a
22 template or a representation of something that
23 someone speaks, like a name, the memory
24 requirements for that were so small, the RAM

1 requirements for an on-board solution, that it
2 was practical to implement that on an on-board,
3 meaning embedded, or off-board.

4 Q. And do you find that algorithm or that
5 -- do you find that algorithm or that
6 development -- withdrawn.

7 MR FRANK: Would you read the last
8 answer to me so I ask the question in the
9 terms that the last answer was articulated.

10 (The testimony referred to was read by
11 the stenographer.)

12 BY MR. FRANK:

13 Q. And is that the method that you said
14 earlier was maintained as a secret at Voice
15 Control Systems?

16 A. Details were never disclosed. But some
17 of the manipulation of the speaker-dependent
18 representations, how you'd manipulate that and
19 do the averaging, was shared with Brite, for
20 example. But how the actual numeric
21 representations were generated, how you got
22 that, was never revealed.

23 Q. And there's nothing in this patent, the
24 966 patent, that describes the method that you

1 just referenced; is that correct?

2 A. The feature extraction process is not
3 disclosed. And that's very relevant to how we
4 generated the speaker-dependent representations
5 of the words spoken. That type of information
6 was not disclosed, to my knowledge, in patents,
7 not the algorithms, per se.

8 Q. In the absence of the methodology that
9 you just described, the stuff that was not
10 disclosed, it's correct, is it not, that it
11 would at the time of the application for this
12 patent, been within the skill of people like
13 yourself to develop a speaker, a combined
14 speaker-dependent and speaker-independent voice
15 recognition system, except that it would have
16 required a lot more computing power and memory?

17 MR. SCHECTER: Objection.

18 THE DEPONENT: I can't paraphrase that
19 question to myself. Are you saying that
20 someone else could go off and copy what we
21 did?

22 BY MR. FRANK:

23 Q. No. I'm saying based upon what was
24 known in the voice recognition art or business

1 as of the date of the application for this
2 patent, is it correct that a person who did not
3 have access to the methodology that you
4 developed, could nevertheless, have had a
5 combined speaker-dependent and
6 speaker-independent voice recognition system,
7 as long as that person had sufficient computing
8 power available to them?

9 MR. SCHECTER: Objection.

10 THE DEPONENT: As long as you had
11 sufficient computing power. In fact, I
12 believe there were other implementations of
13 hybrid recognition solutions,
14 speaker-independent, speaker-dependent.
15 You'd see it in the research labs.

16 BY MR. FRANK:

17 Q. So that was within the scope of what
18 people in the business could do?

19 A. In theory. There was nothing
20 preventing anyone from doing exactly what we
21 did without us knowing it.

22 Q. That's as of when the first of these
23 applications --

24 A. At any time.